EUROPEAN COMMISSION
Information Society and Media Directorate General

Lisbon Strategy and Policies for the Information Society
Lisbon Strategy and i2010

Use of Computers and the Internet in Schools in Europe 2006

Country Brief: Ireland

6 / 2006

Key findings

Basically all Irish schools (100%) now use computers for teaching and have internet access (99%). 66% use the internet via a broadband connection. A substantial 89% of the Irish schools using computers for teaching use them in classrooms (rank 5 in Europe), with the highest percentage being achieved in primary schools where a very high 94% use them In classrooms.

In particular in primary schools in Ireland ICT is used by almost all teachers (87%) whereas in all other school types usage is by around two third of the teachers. Teachers in vocational schools in Ireland use computers in class more frequently than their colleagues in other school types with more than a third using them in more than 25% of their lessons, which compares to just 13% in primary schools.

Irish teachers seem to mostly rely on and use existing online material from established educational sources. With 87% of teachers in this group, the figure is significantly above the European average (74%). The use of CD ROMs also plays an important role, with 88% of the Irish teachers giving this as an important source of material used in class. This is especially true for primary schools in Ireland, where this figure reaches 91%.

Not surprisingly, the older the teachers (indicator used here: years of teaching experience), the less use they make of computers and the internet in schools. This applies to the most frequent ICT users where 12% of the younger but only 4% of the older teachers make use of ICT in more than 50% of the lessons.

3% of all teachers and 16% of Irish teachers not using ICT are not convinced of any benefits of using computers in class and only 7% express the opinion that teachers lack the necessary skills to utilize computers in their teaching. With these figures, Ireland is better positioned than many other countries in Europe and takes rank 8.

However, Ireland ranks at the very bottom in Europe when it comes to teacher's satisfaction with the ICT infrastructure in their schools. Despite the fact that all Irish schools are equipped with some computers and have an internet access, a major problem seems to be the still insufficient ICT equipment and access to the internet in Irish schools indicated by 34%. Also, a very high 85% wish there were better support and maintenance actions taken. In particular teachers in primary and vocational schools state this as an issue.

In terms of content, a considerable number of Irish teachers also seem to have a problem, since 52% state problems with respect to finding adequate learning materials and argue that existing material are of poor quality (41%). With these figures, Ireland takes one of the bottom positions in Europe.

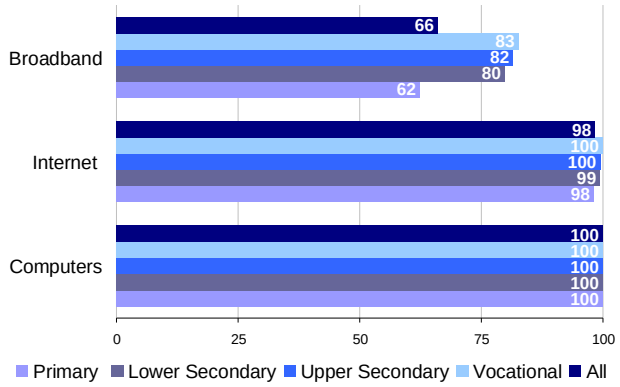
However, Irish teachers rank top in Europe with respect to ICT competence.

91% of Irish teachers see significant learning benefits for pupils using computers in class and say that pupils are more motivated and attentive when computers and the internet are used in class. Here again Ireland takes a good position in Europe and ranks 9th.

ICT Equipment and Internet in Schools

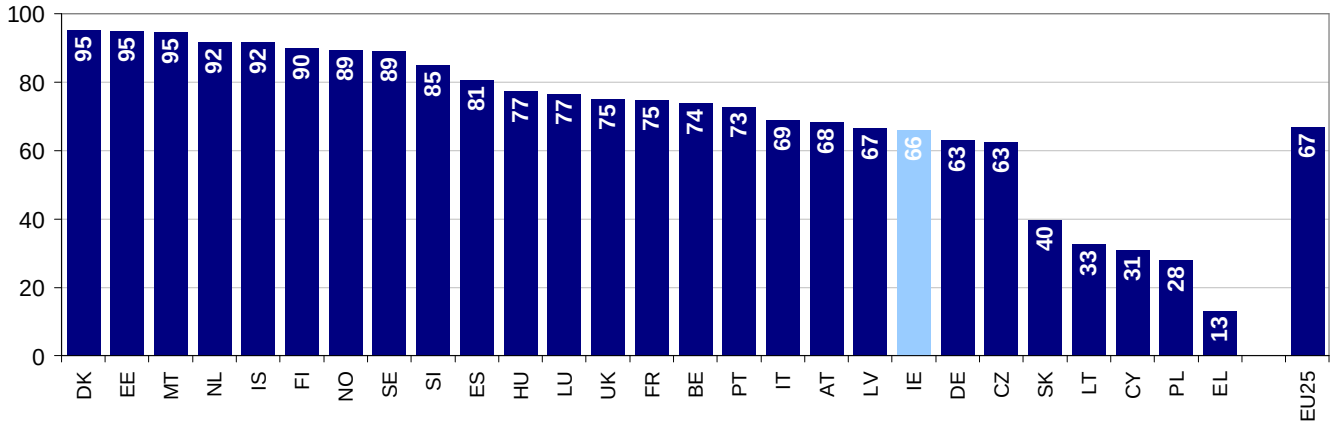
Basically all Irish schools (100%) now use computers for teaching and have internet access (99%). 66% use the internet via a broadband connection. With this figure Ireland ranks at number 20 of the 27 countries participating in the survey. There is a large variation between school types: while only 62% of primary schools have broadband internet connection, the penetration is highest among upper secondary schools, with 82% and vocational schools (83%). There is also some variation with regard to broadband access between urban and rural areas: 70% of schools in densely populated areas have broadband access compared to 56% of schools in thinly populated areas.

Percentage of Schools Using Computers, Internet Connection, and Broadband Internet Access According to School Type in Ireland 2006



Source: *LearnInd HTS 2006;* ***Base:*** *All schools;* ***Question:*** *Computers: Q6; Internet, Broadband: Q9. See questionnaire for exact wording.*

Percentage of Schools with Broadband Internet Access in Europe 2006



Source: *LearnInd HTS 2006;* ***Base:*** *All schools;* ***Question:*** *Q9. See questionnaire for exact wording.*

Only 36% of schools have a website, 56% offer e-mail to teachers, but only 10% do so to pupils.

A substantial 89% of the Irish schools using computers for teaching use them in classrooms with the highest percentage being achieved in primary schools where a very high 94% use them in classrooms. Computers in the school library are rare and more or less restricted to upper level schools.

Those schools with a broadband connection to the internet are much more likely to have a more sophisticated ICT infrastructure including a school website, the use of a LAN or the availability of an intranet.

The use of Computers and the Internet in Schools

Computers are used for various purposes and as part of teaching different subjects in schools but also and very widely as a separate subject.

Computer sciences are taught as a separate subject in just 44% of Irish schools which compares to 55% at EU25 level. With 66% it is highest in vocational schools according to the statements made by Irish head teachers.

A high 82% of Irish classroom teachers had used computers in class in the 12 months prior to the survey, with some variation across school types and between urban and rural areas. Particularly in primary schools in Ireland ICT is used by almost all teachers (87%) whereas in all other school types usage is by around two thirds of the teachers.

For most teachers, this includes not only using a computer for presentation purposes but also the use of computers by pupils in class.

A majority (60%) of the teachers using computers use them in less than 10% of all lessons. 8% state that they use computers in more than half of their lessons. Teachers in vocational schools in Ireland use computers in class more frequently than their colleagues in other school types with more than a third using them in more than 25% of their lessons which compares to just 13% in primary schools.

ICT equipment in Irish schools 2006

			Educational Level (IE)				Type of locality (IE)		Internet Access (IE)	
	Total IE	Total EU25	Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrow-band	Broadband
Computers per 100 pupils [a]	10.3	11.3	9.2	9.6	10.6	14.6	10.9	9.9	9.2	10.6
... of which internet connected	8.7	9.9	7.0	8.9	9.9	14.0	10.0	8.0	5.6	9.7
Percentage of schools having...										
Computers for teaching [b]	100.0	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Internet access [c]	98.4	96.2	98.2	99.4	99.5	100.0	100.0	98.1	100.0	100.0
Broadband internet access [d]	66.1	66.9	62.4	79.8	81.6	82.6	84.2	61.8	0.0	100.0
A website [e]	36.2	63.0	27.8	72.5	71.6	70.7	53.8	32.0	25.1	42.4
An e-mail address for the majority of teachers [f]	56.0	65.2	56.5	52.1	51.4	62.6	53.1	56.7	66.5	52.2
An e-mail address for the majority of pupils [g]	9.9	23.5	9.0	13.6	12.7	15.2	9.5	10.1	7.5	11.4
A LAN [h]	51.7	55.2	45.7	76.0	77.2	77.1	64.0	48.8	29.9	63.6
An intranet [i]	18.0	40.8	14.1	31.1	32.2	43.3	22.8	16.8	17.2	18.8
An external support or maintenance contract [j]	36.4	47.1	33.1	53.6	51.4	45.9	42.4	35.0	28.8	41.0
Percentage of schools using computers for education in...										
Computer labs [k]	47.4	80.5	35.6	98.4	98.7	100.0	86.3	38.2	32.3	54.6
Classrooms [l]	89.0	61.4	94.1	67.1	67.6	64.2	80.1	91.1	90.7	88.6
School library [m]	10.7	33.4	4.9	33.9	35.0	38.8	23.1	7.8	3.7	14.3
Other locations accessible for pupils [n]	24.2	27.0	22.1	33.6	33.5	28.4	19.7	25.3	27.9	23.0

Source: *LearnInd HTS 2006;* ***Base:*** *a: all pupils; b-j: all schools, k-n: schools using computers for educational purposes for pupils (cf. index b);* ***Question:*** *a: Q4, Q6, Q7; b: Q6; c: Q9; d: Q9; e-j: Q12; k-n: Q8. See questionnaire for exact wording.*

Use of computers in class in Ireland 2006

Assessments of the head teacher		Total IE	Total EU25	Educational Level (IE)				Type of locality (IE)		Internet Access (IE)	
				Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated	Narrow-band	Broadband
Computer sciences taught as separate subject	Agree	43.6	54.7	38.4	64.6	65.3	66.4	45.5	43.2	39.7	45.9
	Disagree	55.9	43.7	61.0	35.4	34.7	33.6	54.5	56.2	60.3	53.3
	Don't know	0.5	1.6	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.7
Computers and the internet are											
integrated into teaching of most subjects	Agree	73.7	75.3	76.4	61.3	60.1	61.5	71.6	74.1	70.2	75.4
	Disagree	25.9	24.1	23.1	38.7	39.4	38.5	26.0	25.9	29.8	23.9
	Don't know	0.5	0.6	0.5	0.0	0.5	0.0	2.4	0.0	0.0	0.7
used for teaching traditional subjects or basic skills	Agree	76.4	75.8	79.8	65.1	62.3	57.2	78.3	76.0	78.2	75.6
	Disagree	22.5	22.8	19.3	34.1	36.6	40.5	17.9	23.6	21.8	22.8
	Don't know	1.1	1.4	0.9	0.8	1.1	2.3	3.8	0.4	0.0	1.6
used for teaching foreign languages	Agree	27.4	56.6	22.5	50.1	49.4	46.8	34.3	25.8	27.9	27.9
	Disagree	67.9	40.1	72.2	49.9	50.1	49.3	59.9	69.8	66.3	67.9
	Don't know	4.7	3.3	5.3	0.0	0.5	3.9	5.7	4.4	5.9	4.2
used for teaching students with special needs/ handicaps	Agree	96.6	71.7	97.5	93.6	92.2	92.4	97.5	96.4	99.2	95.3
	Disagree	2.9	23.7	2.0	5.6	7.1	7.6	2.5	3.0	0.8	4.0
	Don't know	0.5	4.6	0.5	0.8	0.7	0.0	0.0	0.6	0.0	0.8

Source: *LearnInd HTS 2006;* ***Base:*** *All schools using computers for educational purposes for pupils;* ***Question:*** *Q13: "To what extent do you agree or disagree with the following statements regarding the educational use of computers and/or the internet in your school*

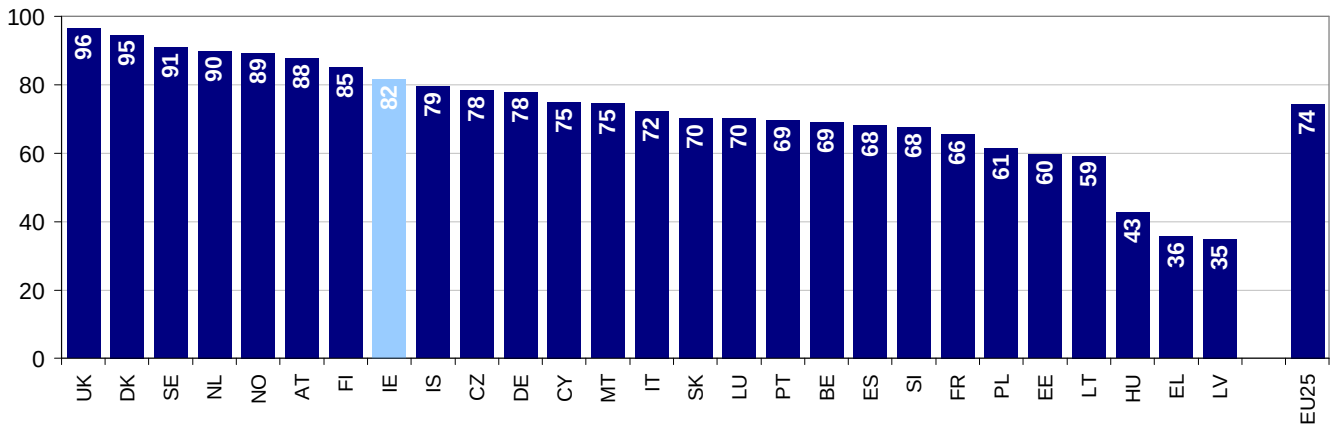
Frequent ICT use in primary school can be found mostly only among teachers using ICT in up to 5% (35% of teachers) or 10% of the lessons (35% plus 27% = 62% of teachers).

Irish teachers using computers do not restrict themselves to a particular source of information but use a multitude of different material from a variety of sources for teaching purposes which in most categories is above or around the European average. Irish teachers seem to mostly rely on and use existing online material from established educational sources. With 87% of teachers in this group, the figure is significantly above the European average (74%). The use of CD ROMs also plays an important role with 88% of the Irish teachers giving this as an important source of material used in class. This is especially true for primary schools in Ireland, where this figure reaches 91%.

Not surprisingly, the older the teachers (indicator used here: years of teaching experience), the less use they make of computers and the internet in schools. This applies to the most frequent ICT users where 12% of the younger but only 4% of the older teachers make use of ICT in more than 50% of the lessons. Older teachers are the more frequent and intensive users when it comes to a less frequent use of ICT in class: 89% of the teachers with more than 20 years of teaching experience use ICT in class in less than 25% of their lessons. This figure is at 81% among those with less than 5 years teaching experience.

18% of teachers do not use computers in class in Ireland. When asked for the most important barrier, three issues gain the highest ratings among this group of teachers: 41% state a lack of computers in their schools as an important barrier.

Percentage of teachers who have used computers in class in the last 12 months (2006)



Source: *LearnInd CTS 2006;* ***Base:*** *All teachers;* ***Question:*** *Q7. See questionnaire for exact wording*

Teachers' use of computers in class in Ireland 2006

Percentage of teachers who ...	Total IE	Total EU25	Educational Level (IE)				Type of locality (IE)		Years of teaching experience (IE)			
			Primary	Lower secon-dary	Upper secon-dary	Voca-tional	Densely popu-lated and inter-mediate	Thinly popu-lated	<5 y	5-9 y	10-19 y	20+ y
...have used computers in class[1]	81.7	74.3	86.5	64.1	64.2	69.9	74.3	83.7	76.6	81.2	88.8	80.5
...use a computer in class to present or demonstrate	58.3	63.4	62.5	42.8	43.8	48.2	55.0	59.2	57.9	61.5	63.2	56.1
...have pupils use a computer in class	66.6	66.3	70.8	47.8	49.1	56.3	61.7	67.9	57.0	61.9	70.6	68.0

Source: *LearnInd CTS 2006;* ***Base:*** *All teachers;* ***Question:*** *Q7 "How have you used computers and/or the internet for work in the last 12 months?"*

Frequency of computers use in class in Ireland 2006

Percentage of all teachers *using computers in class* who ...	Total IE	Total EU25	Educational Level (IE)				Type of locality (IE)		Years of teaching experience (IE)			
			Primary	Lower secon-dary	Upper secon-dary	Voca-tional	Densely popu-lated and inter-mediate	Thinly popu-lated	<5 y	5-9 y	10-19 y	20+ y
...use computers in 5% and less of all lessons	34.1	18.5	34.6	31.7	29.4	27.2	25.9	36.0	*29.0**	28.5	33.3	36.4
in 6 to 10% of lessons	25.9	22.5	27.4	20.3	19.6	18.0	24.0	26.4	*32.6**	14.2	24.7	28.1
in 11 to 24% of lessons	24.6	22.2	25.7	18.6	19.4	21.2	27.7	23.8	*18.9**	34.7	20.3	24.3
in 25 to 50% of lessons	8.0	20.2	6.5	14.4	15.5	16.0	10.4	7.4	*7.4**	7.7	9.5	7.6
more than 50% of lessons	7.5	16.5	5.8	15.0	16.0	17.7	12.0	6.4	*12.0**	14.9	12.2	3.5

Source: *LearnInd CTS 2006;* ***Base:*** *Teachers using computers in class, "don't know" answers excluded;* ***Question:*** *Q9 "For what percentage of time have you used computers and/or the internet in class when teaching your main subject(s) in the past 12 months?"* ***Notes:*** *"xx.x*": based on at least 10 and less than 50 cases.*

16% of those teachers not using ICT are not convinced of any of using computers in class and only 7% express the opinion that teachers lack the necessary skills to utilize computers in their teaching. With these figures, Ireland is better positioned than many other countries in Europe and takes rank 8.

"Lack of equipment in school" is expressed by just 7% of all Irish teachers (18% non-users multiplied with 41% of teachers agreeing to this item), again a good performance in Europe.

Comparison of the situation in 2001 and 2006[2]

In Ireland the percentage of schools using computers for educational purposes had already reached the 100% level in 2001 and was almost at 100% with respect to internet access.

There are no further improvements as to the number of pupils per 100 computers. It has remained at around 11 computers to be shared among 100 pupils over the past five years.

Schools have moved over to broadband. Today 15% (EU25: 45%) of the schools in Ireland are connected to the internet via a DSL connection in 2006. The figure for 2001 was 0% (EU15: 5%). The figures have increased strongly over the past 5 years especially when bearing in mind that the overall figure of schools connected to broadband in Ireland including other means than just DSL is at 66%.

Schools have increased the quality of ICT use to such an extent: while in 2001 48% (EU15: 44%) of the schools in Ireland had their own website, is at around the same figure in 2006 (36% compared to the EU25 average: 62%). The use of a LAN – which was used by 42% (EU15: 47%) of the Irish schools – is now up to 52% (EU25: 54%).

Source of educational material used in class in Ireland 2006

Percentage of all teachers *using computers in class*[3] who ...	Total IE	Total EU25	Educational Level				Type of locality	
			Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated
...use material they have searched the internet for	79.4	82.7	78.2	82.0	83.5	79.6	83.5	78.3
...use existing online material from established educational sources	87.1	74.2	87.7	84.6	84.3	84.0	85.2	87.5
...use material that is available on the school's computer network or database	60.4	63.1	62.9	48.2	43.7	46.2	52.2	62.4
...use electronic offline material (such as CD ROMS)	88.0	83.0	90.7	78.9	75.0	74.3	83.3	89.2
...use other learning material when using computers in class	0.6	8.8	0.4	1.2	1.8	2.5	0.4	0.7

Source: *LearnInd CTS 2006;* ***Base:*** *Teachers using computers in class;* ***Question:*** *Q10 "Which of the following types of materials have you used when teaching your main subject(s) with the aid of a computer and/or the internet?"*

Barriers to computer use in class in Ireland 2006

Percentage of all teachers ***not*** *using computers in class*	Total IE	Total EU25	Educational Level				Type of locality	
			Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated
Lack of computers	40.6	48.8	*28.4**	55.8	60.2	*64.5**	35.4	42.8
Lack of adequate content/material	23.9	20.3	*23.4**	26.2	23.5	*29.4**	15.0	27.9
Lack of content in national language	5.8	8.6	*6.9**	4.7	4.5	*9.8**	0.0	8.3
Lack of adequate skills of teachers	19.0	22.5	*19.0**	16.5	16.0	*19.5**	19.5	18.8
No or unclear benefits	15.5	16.2	*9.0**	27.1	23.3	*24.7**	13.8	16.2
Lack of interest of teachers	7.3	8.9	*5.2**	8.6	9.8	*13.2**	11.6	5.3
Subject does not lend itself to being taught via computers	24.1	24.4	*20.3**	27.6	28.2	*32.8**	21.2	25.4
Other	28.8	21.3	*38.4**	15.0	14.4	*14.3**	22.8	31.4

Source: *LearnInd CTS 2006;* ***Base:*** *all teachers not using computers in class;* ***Question:*** *Q12: "Why do you not use computers and/or the internet when teaching in class?"* ***Notes:*** *"xx.x*": based on at least 10 and less than 50 cases.*

Attitudes on the Usefulness of ICT use in Teaching

Computers and the internet arrived in Irish schools quite a time ago. The share of teachers in Ireland – but also in the European Union in general – who believe that computers and the internet should not at all be used in schools is very low and at only 1%. Irish teachers have positive attitudes about the different applications for ICT in teaching and achieve figures around the EU25 average on attitudes that ICT should be used for letting pupils do exercises and practise (79%), letting pupils retrieve information in a self-directed manner (79%) and for collaborative and productive work by pupils (82%). There are only small differences across school types.

A majority of Irish teachers (59%) still believe that teaching about office tools should be an integral part of the teaching process. With this figure, the country ranks around the EU25 average figure. This attitude is most prominent among teachers in vocational schools (63%) and least prominent in primary schools (59%). It is interesting that there is no common pattern across the European countries. In some countries (e.g. the UK, Norway, Iceland, Cyprus but also Spain) teachers in primary schools express this opinion much more strongly and to a larger extent compared to higher-level schools.

Attitudes on the Usefulness of ICT use in Teaching in Ireland 2006

Percentage of teachers saying computers/internet should be used for …	Total IE	Total EU25	Educational Level				Type of locality	
			Primary	Lower secondary	Upper secondary	Vocational	Densely populated and intermediate	Thinly populated
Letting pupils do exercises and practise	79.0	79.9	80.6	71.1	71.6	75.5	79.3	79.0
Letting pupils retrieve information in a self-directed manner	79.4	85.0	78.1	85.0	85.2	88.0	78.9	79.5
Teaching about office tools	58.7	61.3	58.7	60.5	59.4	62.8	62.1	57.8
Collaborative and productive work by pupils	81.8	80.5	82.0	81.3	81.6	84.1	83.9	81.2
Computer/internet should not be used for any of these in teaching	1.1	0.6	1.0	1.7	1.4	0.7	0.9	1.1

Source: *LearnInd CTS 2006;* ***Base:*** *all teachers;* ***Question:*** *Q13: "What do you think for what computers and the internet should be used for in teaching?".*

Access, Competence and Motivation for Using ICT and the Internet in Schools

Access

Although a majority of Irish teachers are more or less satisfied with the technical access means at their schools (66% state that their school is well equipped with computers and 60% express the opinion that their internet connection is fast enough), these figures on satisfaction are significantly below the European average. Ireland ranks at the very bottom in Europe when it comes to teacher's satisfaction with the ICT infrastructure in their schools.

Also, a very high 85% wish there were better support and maintenance actions taken. Especially teachers in primary and vocational schools state this as an issue. Again, this is a very high percentage. The situation only seems to be poorer in Malta and Latvia.

In terms of content, a considerable number of Irish teachers also seem to have a problem, since 52% state problems with respect to finding adequate learning materials and argue that existing material are of poor quality (41%). With these figures, Ireland takes one of the bottom positions in Europe.

Competence in using ICT

Irish teachers feel most competent at using e-mail and using a text processor programme but are less confident with downloading and installing software and with using presentation software packages.

Primary school teachers (56%) seem to be less ICT competent than those in lower secondary (72%), upper secondary (70%) and vocational schools (67%). However, Irish teachers rank top in Europe with respect to ICT competence.

Teachers' access, competence and motivation for using ICT in class 2006

Percentage of teachers agreeing or strongly agreeing:	Total IE	Total EU25	Educational Level: Primary	Lower secondary	Upper secondary	Vocational	Subject of teaching: General primary	Literature and languages	Humanities and social sciences	Science, maths, computer sciences	Physical, artistic, crafts education	Vocational education
Access												
Our school is well equipped with computers [a]	65.9	74.2	64.2	70.8	74.4	75.7	62.4	75.3	62.4	63.0	86.6	*56.2**
The internet connection we have is sufficiently fast [b]	59.9	77.2	57.8	68.1	69.3	68.7	56.2	62.9	65.9	60.3	*62.8**	*38.6**
Better technical maintenance and support is required in our school [c]	84.6	64.8	85.8	78.7	78.9	84.6	86.0	83.3	82.0	85.3	89.4	*92.4**
Existing teaching materials on the Internet are of poor quality [d]	40.5	29.9	37.6	51.9	53.6	45.8	40.2	35.9	44.1	42.0	*40.3**	*42.3**
It is hard to find adequate learning materials for teaching [e]	52.3	38.7	50.5	60.2	59.0	57.0	51.9	52.2	52.2	49.8	64.5	*55.1**
Motivation												
Pupils are more motivated and attentive when computers and the internet are used in class [f]	90.7	86.3	91.1	88.5	89.6	93.6	91.0	89.6	91.7	90.1	*87.2**	*100.0**
Using computers in class does not have significant learning benefits for pupils [g]	21.5	20.7	20.4	27.4	24.1	23.6	21.2	23.2	22.0	25.9	25.0	*7.4**
Competence												
Teachers in our school do not have sufficient computer skills [h]	59.0	42.0	56.4	72.2	69.7	67.2	58.9	55.4	56.5	61.1	44.2	*52.0**
Competence / computer skills (Percentage of teachers who feel very confident at…)												
Using text processors [i]	57.8	65.0	54.8	67.1	73.9	72.0	57.2	58.5	67.5	54.7	*65.1**	*80.7**
Creating electronic presentations [j]	33.8	34.0	29.5	52.8	57.0	49.7	30.5	34.3	39.7	34.5	*27.4**	*37.8**
Using e-mail [k]	73.4	65.9	72.9	76.5	78.4	77.2	75.1	71.5	72.2	72.8	*71.7**	*85.7**
Downloading and installing software [l]	50.1	35.8	49.3	57.2	56.4	56.3	49.0	48.3	44.3	52.0	*57.3**	*38.9**

Source: *LearnInd CTS 2006;* ***Base:*** *a-h All teachers; i -l Teachers using computers in class* ***Question:*** *a-h Q14, i-l Q11.* ***Notes:*** *"xx.x*": based on at least 10 and less than 50 cases.*

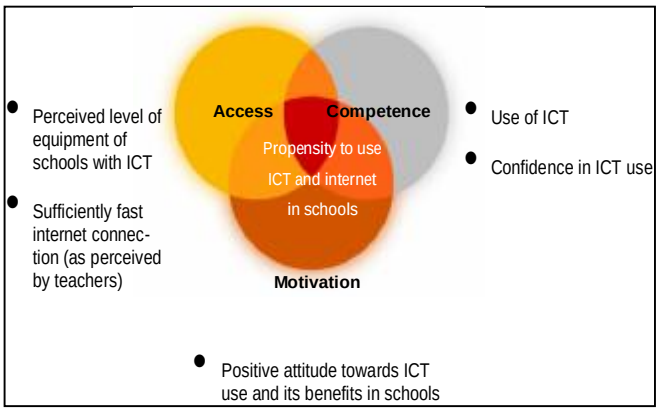
Motivation for ICT use in Schools

91% of Irish teachers see significant learning benefits for pupils using computers in class and say that pupils are more motivated and attentive when computers and the internet are used in class. Also here Ireland takes a good position in Europe and ranks 9th.

ICT Readiness of Teachers – the ACM Model

The ACM model as developed by Viherä and Nurmela (2001)[4] was applied in LearnInd to generate a typology according to the "propensity to the use of computers and internet by teachers in classroom situations at schools".

The Access-Competence-Motivation Model



The typology in the figure below takes account of the three main categories of preconditions which need to be given for a school to make use of computers and the internet in the teaching process in classrooms, computer labs etc.

These are: access (to computers and the internet at school), competence (in using the computer software and the internet, and applying it for teaching purposes), and motivation (gauged through the attitude that using computers in classrooms results in significant learning benefits).

Any attempt to group the classroom teachers according to their propensity to becoming users of computers and the internet in their teaching processes needs to take account of these three dimensions. In the present application of the ACM model data from the Classroom Teacher Survey (CTS) was used. Therefore "access" for instance is to be understood as a perceived level of computer equipment at schools and teachers' satisfaction therewith rather than an objective measure of equipment status.

38% of European teachers dispose of sufficient access to the internet at school, the necessary competence in using ICT in class and are motivated to its use. With 30% of the teachers belonging to this group, Ireland ranks at 19th which places the country towards the bottom of European countries. Overall the UK with 60% ranks top and Latvia with 15% finds itself at the very end.

The as yet insufficient internet connection in many schools and a lack of motivation of teachers for using ICT are the most critical issues for a wider uptake of computers and the internet in schools in Europe. 20% of European teachers indicate insufficient computer equipment and the low speed of internet connection at their school as key

barriers. 14% show a lack of motivation, i.e., they are of the opinion that using computers in class does not result in significant learning benefits.

The situation in Ireland is different. Despite the fact that all Irish schools are equipped with some computers and have an internet access, a major problem seems to be the still insufficient ICT equipment and access to the internet in Irish schools indicated by 34%. As a consequence, Ireland finds itself in the bottom half of European countries on the ICT readiness of schools and teachers.

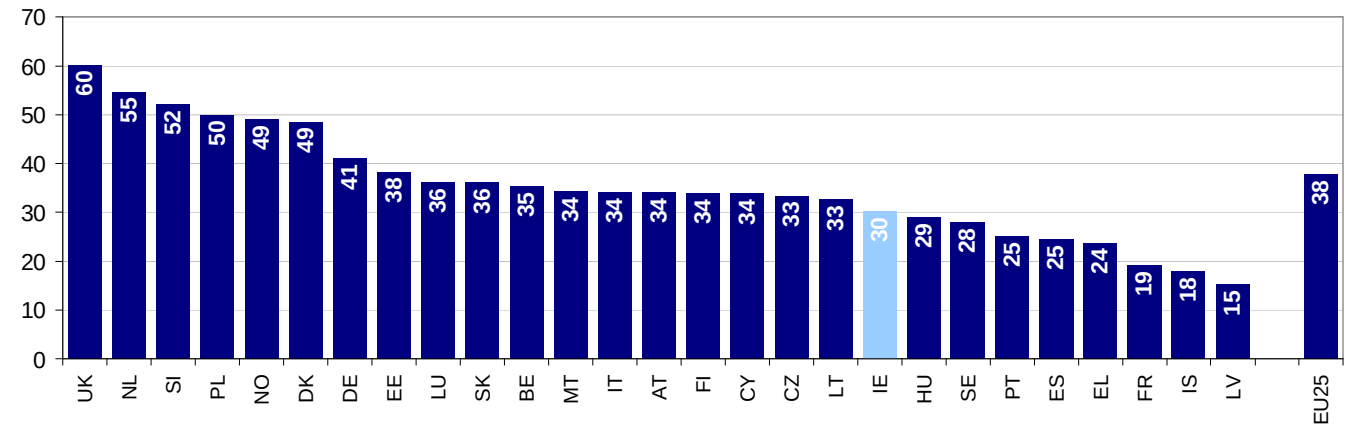
This can not be compensated by very positive results on other indicators since motivation and competence of teachers for using ICT do not seem to constitute a problem in Ireland and are very good.

Access, Motivation and Competence of Teachers for Using ICT in Schools in Ireland 2006

IE	EU25	Access	Competence	Motivation
5.0	4.3	~~Access~~	~~Competence~~	~~Motivation~~
1.9	3.9	**Access**	~~Competence~~	~~Motivation~~
12.0	9.7	~~Access~~	**Competence**	~~Motivation~~
5.5	5.0	~~Access~~	~~Competence~~	**Motivation**
8.2	13.7	**Access**	**Competence**	~~Motivation~~
3.2	4.8	**Access**	~~Competence~~	**Motivation**
34.0	20.7	~~Access~~	**Competence**	**Motivation**
30.2	37.9	**Access**	**Competence**	**Motivation**
100	100			

Percentage of teachers. ***Source:*** *LeanInd CTS 2006;* ***Base:*** *All teachers;* ***Question:*** *See endnote* [5]

ICT Readiness of Teachers in Ireland: Percentage of Teachers Fully Ready to use Computers in Class (ACM Indicator) 2006



Source: *LeanInd CTS 2006;* ***Base:*** *All teachers.* ***Question:*** *See endnote 5*

ANNEXES

Methodology Report

Universe / Sample population

In order to assure the comparability of school levels in all countries UIS-OECD-EUROSTAT "Mapping of national education programmes to ISCED 97 for school academic/year 2002/2003" [6] was used for composing the sample frame. Based on this, each country divided its school system into ICSED codes and made different combinations that existed in its country.

Sampling frame and method

The sample was composed using official databases, which contained contact data of schools. In the majority of countries the sample was drawn from a database received from the Ministry of Education.

For each country a separate template of sample frames was composed by TNS Emor. These templates contained data about school types across regions as well as location type. School types were defined based on the ISCED codes provided in UIS-OECD-EUROSTAT. Location type distribution was made according to the Eurostat type of locality classification which differentiates densely populated, intermediate and thinly populated municipalities[7]. Apart from that, each country was divided into 3-7 regions depending on the size of a country.

Based on the data provided by countries, TNS Emor composed quotas for each country. Two level stratification was used – quotas for first stage, random sample for second. The quotation for region by school type and location type was endorsed. Simple random selection was conducted by the local agency or the local source of the contact base. Both private and public schools were included in the sample. It was also obligatory to include schools of other teaching languages than the official language of a country in the sample.

Simple random sampling was used inside a quota cell. This means that if the quota for primary schools in region1 was 100 and the total number of primary school in this region was 800, then a random sample selection was be made among those 800 schools. This covered also both private and public schools and schools of other teaching languages than the official language of a country.

No more than 50% of interviews could be made in one school level. At least 10% of respondents had to be from schools, which provided professional/vocational or combined programme of vocational and upper secondary level education (in case a country did not have special quota for those schools). It did not matter whether vocational education level was coded as ISCED 3 or ISCED 4.

There were no duplications in samples of head teacher and classroom teacher surveys. This was only allowed in countries with small universe sizes (e.g. Malta, Cyprus, Iceland, Estonia, Latvia etc) and in cases where the last quota cells were very difficult to achieve or there were not enough schools of a certain type. The priority was to include as many different schools as possible. In both surveys, 5 attempts were made before giving up and only if the respondent refused was this person not contacted again.

The CATI programme generated a randomly chosen letter. The interviewer asked for the person with a surname that started on the generated letter. If there was more than one teacher whose surname started with the selected letter, the person who was first alphabetically was chosen. If the correct person was not available, an appointment was made. At least 5 attempts were made, before taking another teacher.

Only in Malta, due to instructions dictated by the Education Department, would the Head Teacher randomly select a teacher that would be available for an appointment during which they would be interviewed.

Number of interviews conducted (HTS / CTS)

Country		Head Teachers	Classroom teachers
BE	Belgium	450	807
CZ	Czech Republic	500	1000
DK	Denmark	315	848
DE	Germany	450	901
EE	Estonia	400	851
EL	Greece	500	1000
ES	Spain	518	1022
FR	France	501	869
IE	Ireland	403	626
IT	Italy	500	900
CY	Cyprus	150	600
LV	Latvia	451	902
LT	Lithuania	457	908
LU	Luxemburg	82	277
HU	Hungary	500	1000
MT	Malta	100	200
NL	Netherlands	515	890
AT	Austria	320	450
PL	Poland	500	1000
PT	Portugal	450	900
SI	Slovenia	253	460
SK	Slovakia	502	1000
FI	Finland	318	601
SE	Sweden	200	450
UK	United Kingdom	450	905
IS	Iceland	177	424
NO	Norway	494	708
TOTAL		**10456**	**20499**

Fieldwork

Fieldwork was coordinated by the TNS Emor and conducted in cooperation with its local TNS offices excluding Iceland, Cyprus, Austria, Slovenia and Malta where TNS does not have offices. In these countries partners with whom TNS had previous experience were used.

Pilot interviews prior to the regular fieldwork were conducted with 20 schools in both target groups in Estonia and Greece in February 2006, in order to test the questionnaire (structure, comprehensibility of questions).

Between March and April 2006, surveys among head teachers (head teacher survey - HTS) and classroom teachers (CTS) were carried out in 27 European countries. TNS Emor was responsible for the fieldwork.

Weighting schemes

After the fieldwork, weighting coefficients were computed using region, location type and school type.

Statistical accuracy of the survey: confidence intervals

Statistics vary in their accuracy, depending on the kind of data and sources. A "confidence interval" is a measure that helps to assess the accuracy that can be expected from data. The confidence interval is the estimated range of values on a certain level of probability of error. Confidence intervals for estimates of a population fraction (percentages) depend on the sample size, the probability of error, and the survey result (value of the percentage) itself. Further to this, variance of the weighting factors has negative effects on confidence intervals.

The calculation of confidence intervals is based on the assumption of (quasi-) infinite population universes. In practice, however, in some countries and for some school levels the complete population of schools consists of only several hundred or even a few dozen of schools. In some cases, literally each and every school within a country-school type cell was contacted and asked to participate in the survey. This means that it is practically impossible to achieve a higher confidence interval through representative school surveys in which participation is not obligatory.

Country Background Data

Ireland has the highest annual population Growth rate in Europe and the highest birth-rate. 40 % of the population live in rural areas, which is the second highest figure in Europe right after Slovenia. With a GDP of 36,751 US$ it is a wealthy country, and there is a high amount of total government expenditure on education. A third of this is invested in primary education, and the pupil / teacher ratio in primary schools is outstanding.

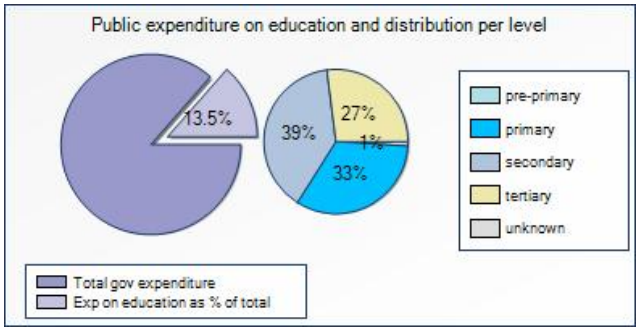
General Population Data for Ireland 2002/03[8]

Total population (000)	3,911
Annual population growth rate (%)*	1.7
Population 0-14 years (%)	21
Rural population (%)*	40
Total fertility rate (births per woman) *	2.0
Infant mortality rate (0/00) *	5
Life expectancy at birth (years) *	78
GDP per capita (PPP) US$ *	36,751
GDP growth rate (%)*	6.9
* World Bank World Development Indicators	

Resources for Education in Ireland 2002/03

Pupil / teacher ratio (primary)	19
Public expenditure on education :	
as % of GDP	4.3
as % of total government expenditure	13.5
Distribution of public expenditure per level (%):	
pre-primary	0
primary	33
secondary	35
tertiary	27
unknown	1

Resources for Education in Ireland 2002/03



The Educational System in Ireland[9]

In 2002, 45% of Ireland's population was aged under 30, and there were 618,000 young people aged 6-16 (the ages wherein education is compulsory). The language of instruction depends on whether the school lies in an Irish (*Gaeltacht*) or English-speaking district or provides Irish-medium education in an almost predominantly English-speaking community.

In 2001/02, approximately 98% of full-time pupils/students attended public-sector schools and 2% attended private non-grant-aided schools (provided and controlled by non-government bodies, and receiving none of their finance from the public sector).

Irish schools at the first and second level are, by and large, privately owned but State funded. While the schools remain in private ownership (largely owned by religious communities) and are locally managed (largely by representatives' boards of management), teacher's salaries and capital/operational costs are almost entirely met by the State.

Until 1998 there was no legislative act governing the education system at first and second level. However, in December 1998, an Education Act was signed into law. The Act provides a statutory basis for the education system at first and second levels. Universities and other higher education institutions are autonomous statutory bodies. School inspection is the responsibility of the Department of Education and Science Inspectorate.

The use of ICT in Education[10]

In the Action Programme for the New Millennium the Government committed itself to a programme aimed at achieving computer literacy throughout the school system. The Schools IT 2000 – A Policy Framework for the new

Millennium - launched in 1998, enhanced by the three year strategy Plan from 2000 to 2003 – *Blueprint for the Future of ICT in Irish Education* – specifically targeted investment (over €130 m) in ICT in primary and secondary schools.

The goals of these initiatives were the establishment of a school ICT infrastructure, the development of teacher ICT skills and support facilities, and the integration of ICT into teaching and learning. Since 1998, pupil/computer ratios have been reduced from 35:1 to less than 11:1 at primary level and from 16:1 to less than 9:1 at second level. Progress has been made in relation to teacher ICT skills, and classroom usage of the technologies.

The Expert Group on Future Skills Needs (EGFSN) is the body appointed by the Irish Government to advise it on aspects of education and training related to the future skills requirements of the enterprise sector of the Irish economy. One of the major recent initiatives was the establishment of an Information Technology Investment Fund, aimed at developing ICT education and training at a number of levels. In addition, the Group's recommendation concerning the establishment of a comprehensive national training/trainers database has been addressed.

The first *Information Society Commission* was established in 1997 and has published a number of documents outlining priorities for reaching the goal of "access for all." However, many of the barriers to an inclusive information society remain, despite the work and recommendations of two Information Society Commissions.

The National Action Plan Against Poverty and Society Exclusion is the core policy mechanism for developing an inclusive information society in Ireland. The Action Plan provides a mechanism that articulates Irish policy for an inclusive information society, addressing EU social policy objectives.

In addition, the Employment Action Plan (EAP) and social partnership agreements also progress the information society agenda. The 2002 report states that adults need to be in a position to undertake ICT training either within the workplace to keep abreast of changing technologies, or for those outside the workforce, in education and training centres where they can train in order to gain access to opportunities.

The Study

There is a lack of information on the actual use of ICT for learning in schools and for supporting political action in potential future programmes. It is necessary to clarify matters such as the educational vision of heads of schools, the current impact of ICTs on teachers' practice, support and training and on other factors for success in e-learning.

The objective of the study is to obtain estimates for the eEurope 2005 indicator on e-learning "number of pupils per computer with Internet connection (broadband/non-broadband)" and relate it to other possible indicators of educational use of ICT in compulsory education (e-learning in schools). The study looks at how Information and Communication Technologies (ICT) are used in schools.

The study is a continuation of the earlier benchmarking exercise for eEurope 2002.

It involved two surveys. Firstly of head teachers to obtain information on the schools and then of teachers to focus on their use of ICTs in the teaching process

This exercise is part of the Information Society monitoring and benchmarking process for which the Commission in cooperation with the Council defined benchmarking indicators.

Country Briefs

This document has been prepared by **empirica** based on own desk research and the above mentioned primary data sources: Head Teacher Survey (HTS) 2006 and Classroom Teacher Survey (CTS) 2006 in the EU25 member states, Iceland and Norway.

Altogether 27 LearnInd Country Briefs are available in a common format, one for each member of the enlarged European Union, Norway and Iceland.

Also a final report has been developed. It includes approximately 100 exhibits, more than 250 data tables and a report about the key results.

You can access and download these documents in PDF format (for free) from http://ec.europa.eu/information_society/eeurope/i2010/benchmarking/index_en.htm.

More information

Check our results and achievements on: http://ec.europa.eu/information_society/eeurope/i2010/benchmarking/index_en.htm. If you wish to be provided with more details, or to receive news and updates, please contact us at: **learnind@empirica.com** or get in touch with us.

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1 Note that "in class" means during lessons while teaching and does not denote a particular location such as a classroom.

2 This section includes some comparisons of the Eurobarometer Flash 94/1001 and 95/102 results from 2001 with those from the LearnInd surveys from 2006. Please bear in mind that the figures are not directly comparable due to the use of slightly different approaches and methodologies.

3 Base (100%) = all teachers who have used a computer in class in the last 12 months.

4 Viherä, M-L, Nurmela, J (2001) "Communication Capability Is an Intrinsic Determinant for Information Age", in Futures, Volume 33, Issue 3-4:245-265.

5 Synthetic indicators: Access: Q14 (2) "Our school is well equipped with computers" and Q14 (3) "The internet connection we have is sufficiently fast ".

Competence: Q11 How confident do you feel... a) using a text processor, b) creating a presentation c) using e-mail, d) downloading and installing software. Threshold: Average of 2.5 or more on a 1-4 confidence scale

Motivation: Q14 (8); disagree to "Using computers in class does not result in significant learning benefits".

For full question wordings refer to questionnaire.

6 http://forum.europa.eu.int/Public/irc/dsis/edtcs/library?l=/public/unesco_collection/programmes_isced97&vm=detailed&sb=Title

7 Densely populated area refers to a set of closely related local units, each one of which having a density greater than 500 inhabitants per km2, and the total population of which being of at least 50 000 inhabitants; Intermediate area refers to a set of closely related

local units that do not pertain to a densely populated area, each one of which having density greater than 100 inhabitants per km2, and where the total population is at least of 50 000 inhabitants or it refers to a set that is adjacent to a highly populated area. Thinly populated area (rural): refers to a set of closely related local units that are not part of a densely populated area, or of an intermediate area. (A set of local areas totalling less than 100 km², not reaching the required density, but entirely enclosed within a densely-populated or intermediate area, is to be considered to form part of that area. If it is enclosed within a densely-populated area and an intermediate area it is considered to form part of the intermediate area).

[8] Source: http://www.uis.unesco.org/profiles/selectCountry_en.aspx (visited 28 March 2006)

[9] Source: http://www.eurydice.org/Documents/struct2/frameset_EN.html (visited: 28 March 2006)

[10] Source: http://europa.eu.int/comm/education/policies/2010/nationalreport_en.html (visited: 9 May 2006)